Mesa Water DISTRICT©

2014 Water Quality Report

Mesa Water District (Mesa Water®) is an independent special district that provides water service to 108,000 customers in an 18-square-mile area. Dedicated to satisfying our community's water needs, Mesa Water® serves most of Costa Mesa, parts of Newport Beach, and some unincorporated areas in the Newport-Mesa area of Orange County, including John Wayne Airport.

Mesa Water® was formed in 1960 when four local water providers merged. The new agency's combined resources, along with an independent board of directors focused solely on providing a reliable supply of drinking water to its service area, allowed the District to build and improve its water delivery infrastructure for its customers.

When the District was formed, and as was common at that time, nearly all of the water provided to its service area was imported from the Colorado River. As the price of imported water started to rise in the 1970s, the District turned to its own local groundwater supplies. In 1978, the District changed its name to Mesa Consolidated Water District as a tribute to its history as an agency. In 2013, the Board updated its name to Mesa Water District, or Mesa Water® for short.

More than Fifty Years of Clean, Safe, and Reliable Water

Mesa Water® is one of the most efficient water agencies in Orange County, according to a study of nearby water districts comparing annual per capita expenditures. From 2000 to 2010, Mesa Water® supplemented its supplies with groundwater treated at the Colored Water Treatment Facility, which was renamed the **Mesa Water Reliability Facility** (MWRF) upon completion of the MWRF Improvements Project in late 2012. The MWRF Improvements Project took place from 2010 to 2012, finishing on budget. Thanks to the additional water produced at the MWRF, Mesa Water® is now providing 100 percent of its water from local, reliable supplies.

Mesa Water® is financially stable and responsible, with an AAA bond rating from both **Fitch** and **Standard & Poor's**. In 2013, the District received a Transparency Certificate of Excellence from the **Special District Leadership Foundation**. Mesa Water® is a **California Special Districts Association** (CSDA) District of Distinction, accredited since 2007 (when the CSDA accreditation was inaugurated) by the Special District Leadership Foundation. This accreditation recognizes agencies that provide essential public services in a fiscally-responsible manner.

Governed by a publicly-elected, five-member **Board of Directors**, Mesa Water® enjoys strong leadership and high customer satisfaction. Mesa Water's directors are knowledgeable, visionary leaders committed to advocating for their customers and consumers, ensuring water resource and infrastructure sustainability, and furthering Mesa Water's long-term viability through its perpetual agency philosophy and management style. According to a recent survey, over 90 percent of Mesa Water's customers are satisfied with their water quality and customer service. Mesa Water® has provided clean, safe, and reliable drinking water to its service area since 1960, with no reportable water quality issues.

This report contains important information about your drinking water. Translate it, or speak with someone who understands it.

يحتوي هذا التقرير على معلومات هامة عن نوعية ماء الشرب في منطقتك. يرجى ترجمته، أو ابحث التقرير مع صديق لك يفهم هذه المعلومات جيداً.

Arabic

这份报告中有些重要的信息，讲到关于您所在社区的水的品质。请您找人翻译一下，或者请能看得懂这份报告的朋友给您解释一下。

Chinese

この資料には、あなたの飲料水についての大切な情報が書かれています。内容をよく理解するために、日本語に翻訳して読むか説明を受けてください。

Japanese

이 보고서에는 귀하가 거주하는 지역의 수질에 관한 중요한 정보가 들어 있습니다. 이것을 번역하거나 충분히 이해하시는 친구와 상의하십시오.

Korean

Este informe contiene información muy importante sobre su agua potable. Para mas información ó traducción, favor de contactar a Customer Service Representative. Telefono: 949.631.1200.

Spanish

Bản báo cáo có ghi những chi tiết quan trọng về phẩm chất nước trong cộng đồng quý vị. Hãy nhờ người thông dịch, hoặc hỏi một người bạn biết rõ về vấn đề này.

Vietnamese

Questions about your water? Contact us for answers.

For more information about this report, or if you have questions related to your drinking water, please contact Tracy Manning, Water Quality & Compliance Supervisor, at 949.574.1031.

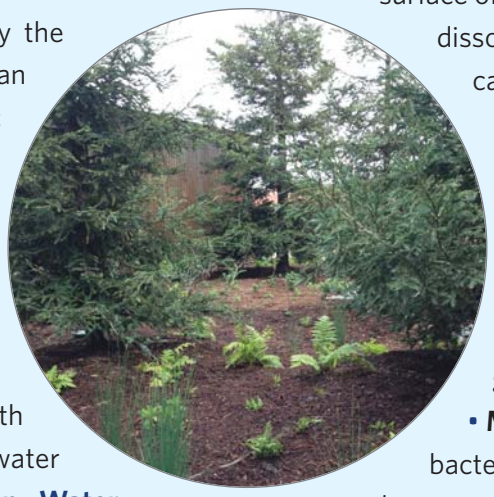
Mesa Water's Board of Directors meets on the second Thursday of each month at 6:00 p.m. Meetings are open to the public and are held at the District's headquarters at 1965 Placentia Avenue in Costa Mesa. Members of the public are encouraged to attend and participate.

For more information regarding these meetings, please call 949.631.1206 or visit **MesaWater.org**.

The Quality of Your Water is Our Primary Concern

Water Supply Sources

Mesa Water® provides water that is a blend of local groundwater. Groundwater, or well water, is pumped from Orange County's natural underground reservoir, or groundwater basin, via Mesa Water's eight wells. The groundwater basin is made of sand and gravel and was formed over thousands of years by the Santa Ana River flowing from the San Bernardino Mountains to the Pacific Ocean. It underlies north-central Orange County, from the Los Angeles County border to Irvine and from Yorba Linda to Huntington Beach. The groundwater basin works as a natural filter and is replenished by water from both the Santa Ana River and imported water purchased from the **Metropolitan Water District of Southern California** (Metropolitan). Mesa Water's groundwater is treated with chloramines — a combination of chlorine and ammonia — before it enters the distribution system.



Mesa Water® supplements its groundwater with water from the **Mesa Water Reliability Facility** (MWRF). Source water for the MWRF is pulled from deep below ground. The water is safe to drink prior to treatment, but has an amber color from ancient redwoods in the groundwater basin. Mesa Water® uses nanofiltration technology to remove the color, adding the clear water to its water supply. Mesa Water's backup supply, should it be needed, would be provided by **Municipal Water District of Orange County** (MWDOC). MWDOC delivers water supplies imported by Metropolitan from the Colorado River and Northern California. Colorado River water originates as snowmelt from mountainous regions in Utah, Wyoming, and Colorado and is transported from Lake Havasu through the 242-mile Colorado River Aqueduct. Northern California water originates as snowmelt in the high Sierras, moving through the Sacramento-San Joaquin Bay-Delta and pumped into the 441-mile California Aqueduct for delivery into Southern California. This system is the State Water Project. Water from both aqueducts is filtered at Metropolitan's Robert B. Diemer Filtration Plant in Yorba Linda, which also uses chloramines for disinfection.

Basic Information About Drinking Water Contaminants

The sources of drinking water (for both tap water and bottled water) include rivers, lakes, streams, ponds, reservoirs, springs and wells. As water travels over the surface of land, or through the layers of the ground, it dissolves naturally-occurring minerals and, in some cases, radioactive material, and can pick up substances resulting from the presence of animal and human activity.

Contaminants that may be present in source water include:

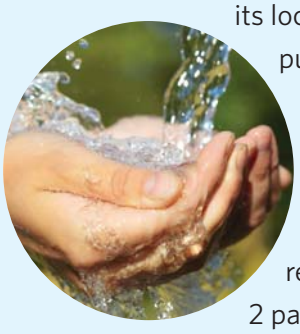
- **Radioactive contaminants**, which can be naturally-occurring or be the result of oil and gas production or mining activities;
- **Microbial contaminants**, such as viruses and bacteria, which may come from sewage treatment plants, septic systems, agricultural livestock operations, and wildlife;
- **Inorganic contaminants**, such as salts and metals, which can be naturally-occurring or result from urban stormwater runoff, industrial or domestic wastewater discharges, oil and gas production, mining, and farming;
- **Pesticides and herbicides**, which may come from a variety of sources such as agriculture, urban stormwater runoff, and residential uses; and/or
- **Organic chemical contaminants**, including synthetic and volatile organic chemicals, which are by-products of industrial processes and petroleum production, and can also come from gasoline stations, urban stormwater runoff, agricultural application, and septic systems.

In order to ensure that tap water is safe to drink, the **U.S. Environmental Protection Agency** (U.S. EPA) and the **California Department of Public Health** (CDPH) prescribe regulations that limit the amount of certain contaminants in water provided by public water systems. CDPH regulations also establish limits for contaminants in bottled water that must provide the same protection for public health. Drinking water, including bottled water, may reasonably be expected to contain at least small amounts of some contaminants. The presence of contaminants does not necessarily indicate that water poses a health risk. More information about contaminants and potential health effects can be obtained by calling the U.S. EPA's Safe Drinking Water Hotline at 800.426.4791.

Information the EPA Would Like You to Know

Drinking Water Fluoridation

Mesa Water® provides drinking water that contains naturally-occurring fluoride. Mesa Water® does not add fluoride to the water it provides. Mesa Water® supplements its local groundwater supply with water purchased from Metropolitan. In November 2007, Metropolitan began adding fluoride to drinking water. Fluoride levels in drinking water are limited under California state regulations at a maximum dosage of 2 parts per million. Metropolitan adjusts the fluoride level to 0.7 to 1.3 parts per million.



For more information about Metropolitan's fluoridation program, please contact:

Edgar G. Dymally, Metropolitan
213.217.5709 • **edymally@mwdh2o.com**

Additional information about the fluoridation of drinking water is available from:

U.S. Centers for Disease Control and Prevention
800.232.4636 • **cdc.gov/fluoridation/**
American Water Works Association • awwa.org

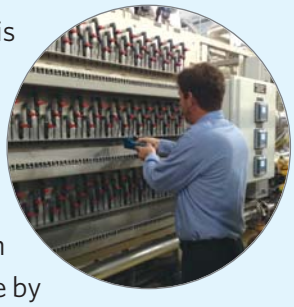
Cryptosporidium

Cryptosporidium is a microscopic organism that, when ingested, can cause diarrhea, fever, and other gastro-intestinal symptoms. The organism comes from animal and/or human wastes and may be in surface water. Metropolitan tested their source water and treated surface water for *Cryptosporidium* in 2013 but did not detect it. If it ever is detected, *Cryptosporidium* is eliminated by an effective treatment combination including sedimentation, filtration, and disinfection.

The U.S. EPA and Centers for Disease Control guidelines on the appropriate means to lessen the risk of infection by *Cryptosporidium* and other microbial contaminants are available from U.S. EPA's Safe Drinking Water Hotline at 800.426.4791 weekdays between 10 a.m. and 4 p.m. Eastern Time (7 a.m. to 1 p.m. in California).

About Lead in Tap Water

If present, elevated levels of lead can cause serious health problems, especially for pregnant women and young children. Lead in drinking water is primarily from materials and components associated with service lines and home plumbing. Mesa Water® is responsible for providing high quality drinking water, but cannot control the variety of materials used in plumbing components. When your water has been sitting for several hours, you can minimize the potential for lead exposure by flushing your tap for 30 seconds to 2 minutes before using water for drinking or cooking. If you are concerned about lead in your water, you may wish to have your water tested. Information on lead in drinking water, testing methods, and steps you can take to minimize exposure is available from the Safe Drinking Water Hotline at 800.426.4791 or **water.epa.gov/drink/info/lead/leadfactsheet.cfm.**



How to Read Your Residential Water Meter

Your water meter is usually located between the sidewalk and curb under a cement cover. The meter reads straight across, like the odometer on your car. Read only the white numbers (0895).

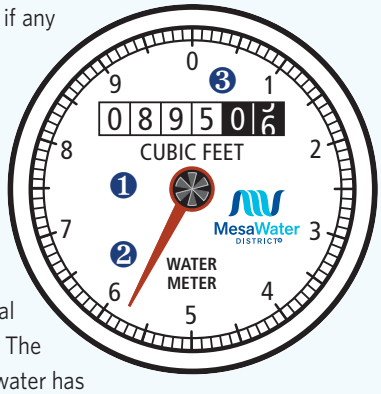
If you are trying to determine if you have a leak, turn off all the water in your home, both indoor and outdoor faucets, and then check the dial for any movement of the low-flow indicator. If there is movement, that indicates a possible leak between the meter and your plumbing system.

For additional water saving tips, visit **MesaWater.org/conservation**.

❶ **Low-Flow Indicator** — The low flow indicator will spin if any water is flowing through the meter.

❷ **Sweep Hand** — Each full revolution of the sweep hand indicates that one cubic foot of water (7.48 gallons) has passed through the meter. The markings at the outer edge of the dial indicate tenths and hundredths of one cubic foot.

❸ **Meter Register** — The meter register is a lot like the odometer on your car. The numbers keep a running total of all the water that has passed through the meter. The register shown here indicates that 89,505 cubic feet of water has passed through this meter.



Issues in Water Quality that Could Affect Your Health

1,4-dioxane

1,4-dioxane is a chemical contaminant primarily used as an industrial stabilizer to enhance performance of solvents in many manufacturing processes. It is found in foods (shrimp, chicken, tomatoes, etc.) and food additives, and ordinary household products (cosmetics, deodorants, and shampoos). The U.S. EPA has classified 1,4-dioxane as a probable human carcinogen. Due to limited data on health effects, there is no federal or state drinking water standard or maximum contaminant level (MCL). The CDPH established a Notification Level of 1 part per billion (1 ppb) for 1,4-dioxane. CDPH does not recommend treatment or removal from service at the levels detected in Mesa Water's groundwater.

Mesa Water® believes that the 1,4-dioxane found in the groundwater originated from the seawater injection barrier. An industrial discharger was identified as the principal source in the recycled water. This source was eliminated and an additional advanced oxidation treatment step was added to reduce 1,4-dioxane from future injection water.

For more information on 1,4-dioxane or other contaminants go to **cdph.ca.gov/certlic/drinkingwater/Pages/1,4-Dioxane.aspx**.

Chloramines

Mesa Water's supply, like Metropolitan's, is treated with chloramines, a combination of chlorine and ammonia, as the drinking water disinfectant. Chloramines are effective in controlling the growth of bacteria and other microorganisms that may cause disease. Chloramines form fewer disinfection byproducts and may have no odor.

People who use kidney dialysis machines may want to take special precautions and consult their physician for the appropriate type of water treatment.

Customers who maintain fish ponds, tanks, or aquaria should also make necessary adjustments in water quality treatment, as these disinfectants are toxic to fish.

For further information or if you have any questions about chloramines, please call Tracy Manning, Mesa Water's Water Quality & Compliance Supervisor at 949.574.1031.

Immuno-Compromised People

Some people may be more vulnerable to contaminants in drinking water than the general population. Immuno-compromised people — such as those with cancer who are undergoing chemotherapy, persons who have had organ transplants, people with HIV/AIDS or other immune system disorders, some elderly persons, and infants — can be particularly at risk from infections. These people should seek advice about drinking water from their health care providers.

Unregulated Contaminants

In 2009, Mesa Water® conducted sampling under the Unregulated Contaminants Monitoring Rule (UCMR2) and again in 2013 for UCMR3. The most recent result for the detected contaminant (N-nitrosodimethylamine) is listed in Table 2.

To obtain additional information on this testing, please contact Tracy Manning at 949.574.1031.

Source Water Assessments

Imported (Metropolitan) Water Assessment

Every five years, Metropolitan is required by CDPH to examine possible sources of drinking water contamination in its State Water Project and Colorado River source waters.

In 2012, Metropolitan submitted to CDPH its updated Watershed Sanitary Surveys for the Colorado River and State Water Project, which include suggestions for how to better protect these source waters. Both source waters are exposed to stormwater runoff, recreational activities, wastewater discharges, wildlife, fires, and other watershed-related factors that could affect water quality.

Water from the Colorado River is considered to be most vulnerable to contamination from recreation, urban/stormwater runoff, increasing urbanization in the watershed, and wastewater. Water supplies from Northern California's State Water Project are most vulnerable to contamination from urban/stormwater runoff, wildlife, agriculture, recreation, and wastewater.

U.S. EPA also requires Metropolitan to complete one Source Water Assessment (SWA) that utilizes information collected in the watershed sanitary surveys. Metropolitan completed its SWA in December 2002. The SWA is used to evaluate the vulnerability of water sources to contamination and helps determine whether more protective measures are needed.

A copy of the most recent summary of either Watershed Sanitary Survey or the SWA can be obtained by calling Metropolitan at 213.217.6850.

Groundwater Assessment

An assessment of the drinking water sources for Mesa Water® was completed in December 2002 and was updated in 2011. The sources are considered most vulnerable to the following activities: dry cleaners, gas stations, known contaminant plumes, metal plating/finishing/fabricating and plastics/synthetics producers.

A copy of the complete assessment is available at the CDPH Office of Drinking Water, Santa Ana District, 28 Civic Center Plaza, Room 325, Santa Ana, California 92701. You may request a summary of the assessment by contacting Tracy Manning, Water Quality & Compliance Supervisor, at 949.574.1031.

Table 1: 2013 Metropolitan Water District of Southern California Treated Surface Water

Constituent	MCL	PHG, or (MCLG)	Diemer Average	Weymouth Average	Range of Detections	MCL Violation?	Typical Source in Drinking Water
Radiologicals – Tested in 2011							
Alpha Radiation (pCi/L)	15	(0)	3	ND	ND – 3	No	Erosion of Natural Deposits
Beta Radiation (pCi/L)	50	(0)	ND	4	ND – 6	No	Decay of Man-made or Natural Deposits
Uranium (pCi/L)	20	0.43	2	2	1 – 2	No	Erosion of Natural Deposits
Inorganic Constituents – Tested in 2013							
Aluminum (ppm)	1	0.6	0.16	0.14	0.095 – 0.23	No	Treatment Process Residue, Natural Deposits
Arsenic (ppb)	10	0.004	2	ND	ND – 2	No	Erosion of Natural Deposits
Fluoride (ppm) treatment-related	Control Range 0.7 – 1.3 ppm Optimal Level 0.8 ppm		0.8	0.8	0.7 -1	No	Water Additive for Dental Health
Nitrate (ppm as NO_3)	45	45	1.8	2.2	1.8 – 2.2	No	Agriculture Runoff and Sewage
Secondary Standards* – Tested in 2013							
Aluminum (ppb)	200*	600	160	140	95 – 230	No	Treatment Process Residue, Natural Deposits
Chloride (ppm)	500*	n/a	86	88	84 – 91	No	Runoff or Leaching from Natural Deposits
Color (color units)	15*	n/a	1	1	1	No	Runoff or Leaching from Natural Deposits
Odor (threshold odor number)	3*	n/a	3	4	3 – 6	No	Naturally-occurring Organic Materials
Specific Conductance (µmho/cm)	1,600*	n/a	890	870	850 – 900	No	Substances that Form Ions in Water
Sulfate (ppm)	500*	n/a	190	180	170 – 200	No	Runoff or Leaching from Natural Deposits
Total Dissolved Solids (ppm)	1,000*	n/a	540	530	520 – 560	No	Runoff or Leaching from Natural Deposits
Unregulated Constituents – Tested in 2013							
Alkalinity, total as $CaCO_3$ (ppm)	Not Regulated	n/a	110	110	76 – 130	n/a	Runoff or Leaching from Natural Deposits
Boron (ppm)	Not Regulated	n/a	0.14	0.15	0.14 – 0.15	n/a	Runoff or Leaching from Natural Deposits
Calcium (ppm)	Not Regulated	n/a	60	58	56 – 61	n/a	Runoff or Leaching from Natural Deposits
Hardness, total as $CaCO_3$ (ppm)	Not Regulated	n/a	250	240	230 – 250	n/a	Runoff or Leaching from Natural Deposits
Hardness, total (grains/gal)	Not Regulated	n/a	15	14	13 – 15	n/a	Runoff or Leaching from Natural Deposits
Magnesium (ppm)	Not Regulated	n/a	22	22	21 – 23	n/a	Runoff or Leaching from Natural Deposits
N-Nitrosodimethylamine (ppt)	Not Regulated	n/a	ND	ND	ND – 11	n/a	By-Product of Drinking Water Disinfection
pH (pH units)	Not Regulated	n/a	8.1	8.1	8.1	n/a	Hydrogen Ion Concentration
Potassium (ppm)	Not Regulated	n/a	4.2	4.2	4 – 4.4	n/a	Runoff or Leaching from Natural Deposits
Sodium (ppm)	Not Regulated	n/a	84	82	79 – 87	n/a	Runoff or Leaching from Natural Deposits
Total Organic Carbon (ppm)	Not Regulated	TT	2.5	2.4	2.1 – 2.7	n/a	Various Natural and Man-made Sources
Vanadium (ppb)	Not Regulated	n/a	ND	3	ND – 3	n/a	Naturally-occurring; Industrial Waste Discharge

ppb = parts-per-billion; **ppm** = parts-per-million; **ppt** = parts-per-trillion; **pCi/L** = picoCuries per liter; **NTU** = nephelometric turbidity units; **µmho/cm** = micromhos per centimeter; **NR** = not required to be tested; **ND** = not detected; **NL** = Notification Level; **<** = average is less than the detection limit for reporting purposes; **MCL** = Maximum Contaminant Level; **(MCLG)** = federal MCL Goal; **PHG** = California Public Health Goal; **n/a** = not applicable; **TT** = treatment technique *Constituent is regulated by a secondary standard.

Turbidity – combined filter effluent Diemer and Weymouth Filtration Plant	Treatment Technique	Turbidity Measurements Diemer	Weymouth	Range of Detections	TT Violation?	Typical Source in Drinking Water
1) Highest single turbidity measurement	0.3 NTU	0.06	0.05	—	No	Soil Runoff
2) Percentage of samples less than 0.3 NTU	95%	100%	100%	—	No	Soil Runoff

Turbidity is a measure of the cloudiness of the water, an indication of particulate matter, some of which might include harmful microorganisms. **NTU** = nephelometric turbidity units
Low turbidity in Metropolitan's treated water is a good indicator of effective filtration. Filtration is called a "treatment technique" (TT).
A treatment technique is a required process intended to reduce the level of contaminants in drinking water that are difficult and sometimes impossible to measure directly.

Unregulated Constituents Requiring Monitoring

Constituent	Notification Level	PHG	Average Amount	Range of Detections	Most Recent Sampling Dates
Chlorate (ppb)	800	n/a	67.7	67.7	2013
Chromium, Hexavalent (ppb)	n/a	0.02	0.06	0.06	2013
Molybdenum, Total (ppb)	n/a	n/a	4.5	4.5	2013
Strontium, Total (ppb)	n/a	n/a	899	899	2013
Vanadium, Total (ppb)	50	n/a	2.9	2.9	2013

Chart Legend

What are Water Quality Standards?

Drinking water standards established by U.S. EPA and CDPH set limits for substances that may affect consumer health or aesthetic qualities of drinking water. The chart in this report shows the following types of water quality standards:

- **Maximum Contaminant Level (MCL):** The highest level of a contaminant that is allowed in drinking water. Primary MCLs are set as close to the PHGs (or MCLGs) as is economically and technologically feasible.
- **Maximum Residual Disinfectant Level (MRDL):** The highest level of a disinfectant allowed in drinking water. There is convincing evidence that addition of a disinfectant is necessary for control of microbial contaminants.
- **Secondary MCLs** are set to protect the odor, taste, and appearance of drinking water.
- **Primary Drinking Water Standard:** MCLs for contaminants that affect health along with their monitoring and reporting requirements and water treatment requirements.
- **Regulatory Action Level (AL):** The concentration of a contaminant, which, if exceeded, triggers treatment or other requirements that a water system must follow.

How are Contaminants Measured?

Water is sampled and tested throughout the year. Contaminants are measured in:

- parts per million (ppm) or milligrams per liter (mg/L)
- parts per billion (ppb) or micrograms per liter (µg/L)
- parts per trillion (ppt) or nanograms per liter (ng/L)

What is a Water Quality Goal?

In addition to mandatory water quality standards, U.S. EPA and CDPH have set voluntary water quality goals for some contaminants. Water quality goals are often set at such low levels that they are not achievable in practice and are not directly measurable. Nevertheless, these goals provide useful guideposts and direction for water management practices. The chart in this report includes three types of water quality goals:

- **Maximum Contaminant Level Goal (MCLG):** The level of a contaminant in drinking water below which there is no known or expected risk to health. MCLGs are set by U.S. EPA.
- **Maximum Residual Disinfectant Level Goal (MRDLG):** The level of a drinking water disinfectant below which there is no known or expected risk to health. MRDLGs do not reflect the benefits of the use of disinfectants to control microbial contaminants.
- **Public Health Goal (PHG):** The level of a contaminant in drinking water below which there is no known or expected risk to health. PHGs are set by the California Environmental Protection Agency.

Table 2: 2013 Mesa Water District Groundwater Quality

Constituent	MCL	PHG (MCLG)	Average Amount	Range of Detections	MCL Violation?	Most Recent Sampling Date	Typical Source in Drinking Water
Radiologicals							
Uranium (pCi/L)	20	0.43	<1	ND – 1.95	No	2013	Erosion of Natural Deposits
Inorganic Constituents							
Fluoride (ppm)	2	1	0.49	0.23 – 0.8	No	2013	Erosion of Natural Deposits
Nitrate (ppm as NO_3)	45	45	<2	ND – 5.4	No	2013	Fertilizers, Septic Tanks
Nitrate+Nitrite (ppm as N)	10	10	<0.4	ND – 1.24	No	2013	Fertilizers, Septic Tanks
Secondary Standards*							
Color (color units)	15*	n/a	0.9	ND – 8	No	2013	Erosion of Natural Deposits
Chloride (ppm)	500*	n/a	60	23.9 – 112	No	2013	Erosion of Natural Deposits
Odor (odor units)	3*	n/a	<1	ND – 8	No	2013	Naturally-occuring Organic Materials
Specific Conductance (µmho/cm)	1,600*	n/a	597	363 – 789	No	2013	Erosion of Natural Deposits
Sulfate (ppm)	500*	n/a	50.9	2.2 – 122	No	2013	Erosion of Natural Deposits
Total Dissolved Solids (ppm)	1,000*	n/a	347	206 – 478	No	2013	Erosion of Natural Deposits
Turbidity (NTU)	5*	n/a	0.32	ND – 1.1	No	2013	Erosion of Natural Deposits
Unregulated Constituents Requiring Monitoring							
Alkalinity, total (ppm as $CaCO_3$)	Not Regulated	n/a	150	105 – 188	n/a	2013	Erosion of Natural Deposits
Bicarbonate (ppm as HCO_3)	Not Regulated	n/a	177	129 – 209	n/a	2013	Erosion of Natural Deposits
Boron (ppm)	Not Regulated	n/a	0.19	ND – 0.4	n/a	2013	Erosion of Natural Deposits
Calcium (ppm)	Not Regulated	n/a	36.6	8.5 – 73.2	n/a	2013	Erosion of Natural Deposits
1,4-Dioxane (ppb)	Not Regulated	n/a	2.4	ND – 8.7	n/a	2013	Treated Wastewater
Hardness, total (ppm as $CaCO_3$)	Not Regulated	n/a	121	23.1 – 248	n/a	2013	Erosion of Natural Deposits
Magnesium (ppm)	Not Regulated	n/a	7.12	ND – 15.7	n/a	2013	Erosion of Natural Deposits
N-Nitrosodimethylamine (NDMA) (ppt)	Not Regulated	3	<2	ND – 4	n/a	2013	Treated Wastewater
pH (units)	Not Regulated	n/a	8.16	7.9 – 8.7	n/a	2013	Acidity, hydrogen ions
Potassium (ppm)	Not Regulated	n/a	1.65	0.9 – 2.2	n/a	2013	Erosion of Natural Deposits
Sodium (ppm)	Not Regulated	n/a	73.8	39 – 144	n/a	2013	Erosion of Natural Deposits
Vanadium (ppb)	Not Regulated	n/a	4.87	ND – 8.1	n/a	2013	Erosion of Natural Deposits

ppb = parts-per-billion; **ppm** = parts-per-million; **ppt** = parts-per-trillion; **pCi/L** = picoCuries per liter; **NTU** = nephelometric turbidity units; **ND** = not detected; **n/a** = not applicable;
< = average is less than the detection limit for reporting purposes; **MCL** = Maximum Contaminant Level; **(MCLG)** = federal MCL Goal; **PHG** = California Public Health Goal
µmho/cm = micromho per centimeter *Constituent is regulated by a secondary standard to maintain aesthetic qualities (taste, odor, color).

2013 Mesa Water District Distribution System Water Quality

Disinfection Byproducts	MCL (MRDL/MRDLG)	Average Amount	Range of Detections	MCL Violation?	Typical Source in Drinking Water
Total Trihalomethanes (ppb)	80	44	3.4 – 49	No	Byproducts of Chlorine Disinfection
Haloacetic Acids (ppb)	60	14	ND – 16	No	Byproducts of Chlorine Disinfection
Chlorine Residual (ppm)	(4 / 4)	2.16	0.58 – 3.44	No	Disinfectant Added for Treatment
Aesthetic Quality					
Color (color units)	15*	1.2	ND – 10	No	Erosion of Natural Deposits
Odor (threshold odor number)	3*	1.5	ND – 8	No	Erosion of Natural Deposits
Turbidity (NTU)	5*	0.14	ND – 1.5	No	Erosion of Natural Deposits

Eight locations in the distribution system are tested quarterly for total trihalomethanes and haloacetic acids; 25 locations are tested monthly for color, odor and turbidity.
MRDL = Maximum Residual Disinfectant Level; **MRDLG** = Maximum Residual Disinfectant Level Goal; **PHG** = Public Health Goal; **NTU** = nephelometric turbidity units; **ND** = not detected
< = detected but less than the reporting limit; *Constituent is regulated by a secondary standard to maintain aesthetic qualities.

Bacterial Quality	MCL	MCLG	Highest Monthly Positive Samples	MCL Violation?	Typical Source in Drinking Water
Total Coliform Bacteria	5%	0	1.50%	No	Naturally Present in the Environment

No more than 5% of the monthly samples may be positive for total coliform bacteria.
The occurrence of 2 consecutive total coliform positive samples, one of which contains fecal coliform/*E. coli*, constitutes an acute MCL violation.

Lead and Copper Action Levels at Residential Taps

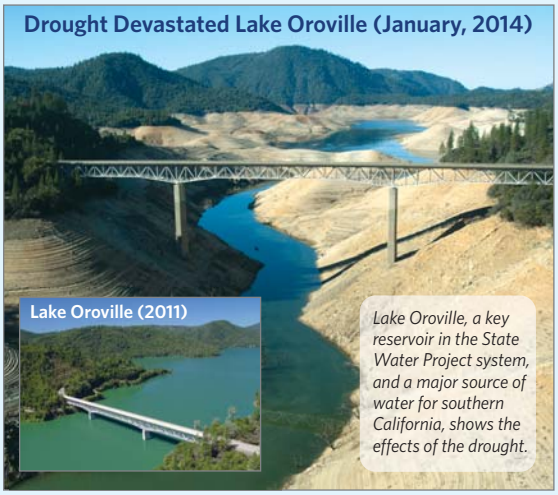
	Action Level (AL)	Public Health Goal	90th Percentile Value	Sites Exceeding AL / Number of Sites	AL Violation?	Typical Source in Drinking Water
Copper (ppm)	1.3	0.3	0.1	0 / 57	No	Corrosion of Household Plumbing
Lead (ppb)	15	0.2	ND<5	0 / 57	No	Corrosion of Household Plumbing

Every three years, at least 50 residences are tested for lead and copper at-the-tap. The most recent set of samples was collected in 2011.
Lead was detected in 1 home; 0 exceeded the regulatory action level. Copper was detected in 19 samples; 0 exceeded the action level.
A regulatory action level is the concentration of a contaminant which, if exceeded, triggers treatment or other requirements that a water system must follow.

Unregulated Constituents Requiring Monitoring

Constituent	Notification Level	PHG	Average Amount	Range of Detections	Most Recent Sampling Dates
Chlorate (ppb)	800	n/a	320	320	2013
Chromium, Hexavalent (ppb)	n/a	0.02	0.23	0.23	2013
Molybdenum, Total (ppb)	n/a	n/a	5.7	5.7	2013
N-Nitrosodimethylamine (ppt)	10	3	<2	ND – 2.1	2009
Strontium, Total (ppb)	n/a	n/a	566	566	2013
Vanadium, Total (ppb)	50	n/a	3.9	3.9	2013

It's Official: California is in a Drought



Lake Oroville, a key reservoir in the State Water Project system, and a major source of water for southern California, shows the effects of the drought.

2013 was the driest year on record in California, and as dry conditions continue, some regions throughout the state are being severely impacted.

On January 17, 2014, Governor Jerry Brown declared a drought emergency and asked that all Californians voluntarily reduce their water use by 20%. While there is no immediate danger of water supply interruptions here in Orange County, we must use our water supplies as efficiently as possible because we don't know how long the drought will last.

Southern California is well-prepared and in better shape than other parts of the state because we have made infrastructure investments for dry periods like this. Over the past 20 years, more than $15 billion was invested in water storage and infrastructure improvements that will help sustain us now, and ensure reliability in the future. The drought is a serious reminder that we must continue to invest in water infrastructure and reliability projects.

Conservation Tips for Inside Your Home

Wash only full loads of laundry and dishes:
Saves up to 50 gallons per week

Fix household leaks promptly:
Saves up to 20 gallons per day

Spend only 5 minutes in the shower:
Saves up to 8 gallons each time

Turn off the water while you brush your teeth:
Saves up to 2.5 gallons per minute

Buy water-saving devices like high-efficiency toilets and clothes washers. Many of them are eligible for rebates and you'll save many gallons of water per day.

Further conservation ideas and rebate information are available at ***MesaWater.org/conservation****.*

. . . and for Outside Your Home

Water your lawn 1 to 2 days a week instead of 5 days a week:
Saves up to 840 gallons per week

Check your sprinkler system for leaks, overspray and broken sprinkler heads and repair promptly:
Saves up to 500 gallons per month

Use a broom instead of a hose to clean driveways and sidewalks:
Saves up to 150 gallons each time

Water your plants in the early morning or evening to reduce evaporation and ineffective watering due to wind:
Saves up to 25 gallons each time

Additional water saving steps and devices are also available, and some of these are eligible for substantial rebates. Consider replacing your lawn with drought-tolerant plants, synthetic turf, or permeable hardscape, or add rotating sprinkler nozzles, a weather-based controller, or drip line to enhance the irrigation of your yard. Hundreds of gallons a year can be saved by simply using mulch around plants to reduce evaporation.

Further conservation ideas and rebate information are available at ***MesaWater.org/conservation****.*

Talk to your family and friends about saving water. If everyone does a little, we all benefit a lot.

Want Additional Information?

There's a wealth of information on the internet about Drinking Water Quality and water issues in general, especially the drought and conservation. Some good sites — both local and national — to begin your own research are:

Mesa Water District: **MesaWater.org**

Metropolitan Water District of Southern California: **mwdh2o.com**

U.S. Environmental Protection Agency: **epa.gov/safewater**

California Department of Water Resources: **water.ca.gov**

Water Conservation Tips & Rebate Information: **bewaterwise.com**